

A1  
cont

presented is to prevent undue distribution of stray magnetic flux and reduce the undesirable power losses. At higher speeds the system power increases due to windage loading, bearing losses, magnetic coupling, etc. It is highly desirable that power dissipation be prevented from increasing as drive performance is incremented. With this requirement, this patent seeks to reduce system losses due to magnetic fringing from the spindle motor magnet. Two components of magnet losses are being addressed here, one is Magnetic Hysteresis and is directly related to magnetic angular velocity.  $\text{Power hyst} = d\phi dT$  and  $is = 2 * \pi * \text{RPM}/60$  \*number of magnetic poles.

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A2

[0008] The main objective of the invention is to provide means for capturing stray magnetic flux and keeping it from interacting with surrounding metal of the motor frame, in order to prevent unnecessary drag being imposed on the rotation of the magnet and hub.

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A3

[0021] As noted above, the flange shield may extend either partly or entirely across the axial end of the magnet, and may be fastened directly to the axial end of the magnet although it may be spaced there from. In either arrangement, the method for attachment should permit the flange shield to perform its function of capturing stray magnetic fields from the magnet. It should be formed of the same or similar metal to that used in the back iron, typically steel or mu metal.

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